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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,981	02/14/2002	Ryoji Toyofuku	101154-00009	4937

7590 07/21/2003

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EXAMINER

LUM, LEE S

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/073,981

Applicant(s)

TOYOFUKU ET AL.

Examiner

Ms. Lee S. Lum

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. An Amendment was filed 6/3/03.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-6** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In Claim 1, it is recited "the nut is disposed between the rack and... motor" (emphasis added). This configuration is not evident in the figures. And while the spec, on p 12, paragraph 39, provides this same language, it is modified by the following sentence beginning with "In other words,...", which is an accurate description of the configuration in the drawings. Amendment/clarification is required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, last lines, "the nut is disposed between the rack and... motor" (emphasis added) is not evident in the drawings. Fig 2 depicts the nut 73 to one side of motor 50, and engaged with the rack 32.

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-4** are rejected under 35 U.S.C. 102(b) as being anticipated by Joshita 5971094.

Joshita discloses an electric power steering apparatus for a vehicle comprising  
Rack shaft 3 with rack 4 of gear teeth at one end, and externally-threaded screw 61 at one portion,

Pinion 3a meshing with the rack,

Ball-screw mechanism 10 with balls 62 and nut 63 engaged with the screw,

Electric motor 8 with hollow shaft 8e extending around the rack shaft,

The hollow shaft engaged with the nut so as to form a connection (Fig 5),

wherein the nut is disposed between the rack and motor (as best understood),

and,

Torque limiter 51 between the hollow shaft and nut, and comprising a split ring of resilient material (col 5, last paragraph, to col 6, line 4) with a plurality of engagement ribs (Fig 7a).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5A. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Joshita in view of Onodera et al 5904.

Joshita does not disclose the motor as including a commutator and brushes, while Onodera shows commutator 22 and brushes 23. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include these elements, as shown in Onodera, as an alternate means of producing current for different applications.

5B. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Joshita in view of Sugino et al 5927429.

Joshita does not disclose a rack guide, while Sugino shows rack guide 50. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include a rack guide, as shown in Sugino, so that the rack shaft may be properly supported during movement, and to properly engage the pinion with the rack.

Joshita does not disclose a bush at the other end of the rack shaft, while Sugino shows bush 75 in Fig 6. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this element so that this portion of the rack shaft is properly supported for optimal performance.

6. RESPONSE TO REMARKS

Generally, Examiner reiterates her rejections as provided above.

In particular, with respect to remarks on p 5, middle paragraph, Applicant argues that Joshita does not disclose "the ball nut as between the portion of the rack 4 that engages the pinion 3a and motor 8". Applicant therefore concludes that Joshita does not obviate Claim 1's recitation, "the nut is disposed between the rack and motor". However, it is noted Applicant's remark is NOT provided in the claim. Nor is the recitation in Claim 1 evident in the drawings. (See paragraphs 2 and 3 above). Instead, the figures clearly depict the nut 73 as disposed to one side of the motor 50, and not literally "between the rack and motor" (emphasis added). (This limitation was interpreted in the broadest sense in the art rejection.) Therefore, it is maintained Joshita discloses the relevant elements as indicated above.

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Re the combination of Joshita with Onodera, etc, respectively, the rejections are proper within the scope of 35 USC 103. The combinations clearly show the respective elements in the claims.

7. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, M-F, 9-6. Our fax numbers are (703) 872-9326, 872-9327 for after-final comms, and 308-2571 for comms having given prior notice to the examiner. Any inquiry of a general nature, or relating to the status of this application/proceeding, should be directed to Customer Assistance at (703) 306-5771.

Ms. Lee S. Lum  
Examiner  
7/21/03

A handwritten signature in black ink, appearing to be 'J. Lum', written over the printed name and date.